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February 2, 1994

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Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W.
Room 222
Washington, D.C. 20554

Re: GEN Docket No. 90-314
Ex Parte Presentation

RECEIVED

FEB - 2 1994


FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Dear Mr. Caton:

On February 2, 1994, representatives of Apple Computer, Inc., the Business Software Alliance, Microsoft Corp., and Compaq Computer Corp. met with Byron Marchant, Brian Fontes, Dr. Thomas Stanley, Bruce Franca, and Karen Brinkman, and provided a copy of the attached documents to each of these persons. Two copies of this presentation are hereby submitted for the public record in this proceeding, pursuant to 47 C.F.R. § 1.1206(a)(1).

If there are any questions in this regard, please contact the undersigned.

Sincerely,


Henry Goldberg

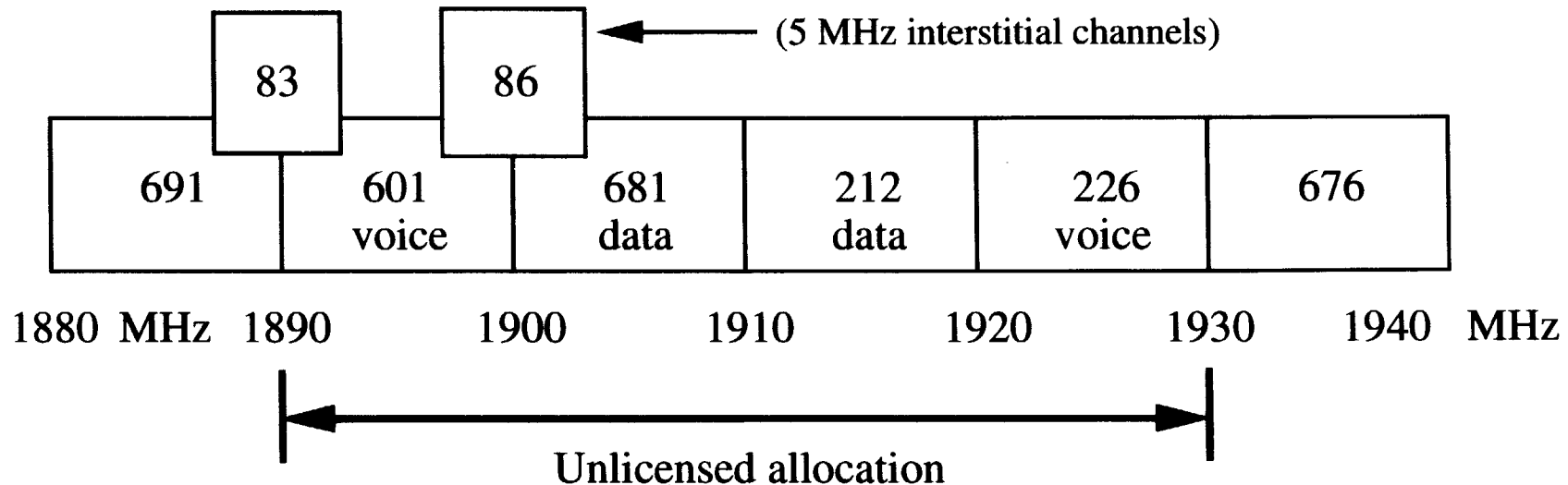
cc: Mr. Brian F. Fontes
Mr. Byron Marchant
Dr. Thomas Stanley
Mr. Bruce Franca
Ms. Karen Brinkman

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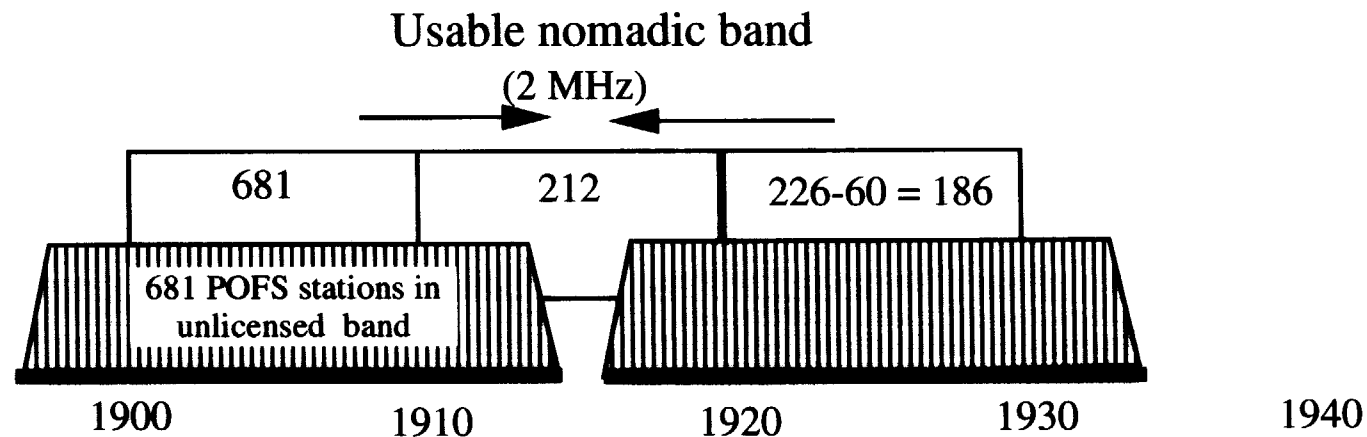
EFFECTS OF ADJACENT CHANNEL USERS ON BANDWIDTH AVAILABLE FOR NOMADIC DEVICES.

Present band occupancy: # of microwave receivers in each channel.



**ALTERNATIVE A . 1900 – 1920 IS ASSIGNED FOR
DATA. (PRESENT FCC SCHEME)**

- CASE 1**
- A. UTAM clears all 212 stations from the data band.
 - B. UTAM clears 25-60 stations from the voice band at cost of \$6 to \$15 million. (Assume 60 stations.)
 - C. Assume a **4 MHz guard band** is sought and approx 1/3 of adjacent stations will require modification.



**Relocating 212 cochannel, and modifying approx 290 of the
867 adjacent, stations provides two MHz for nomadic data.**

Cost assumption 212 x \$250K = \$53 Million

290 x \$25K = \$7.2 Million

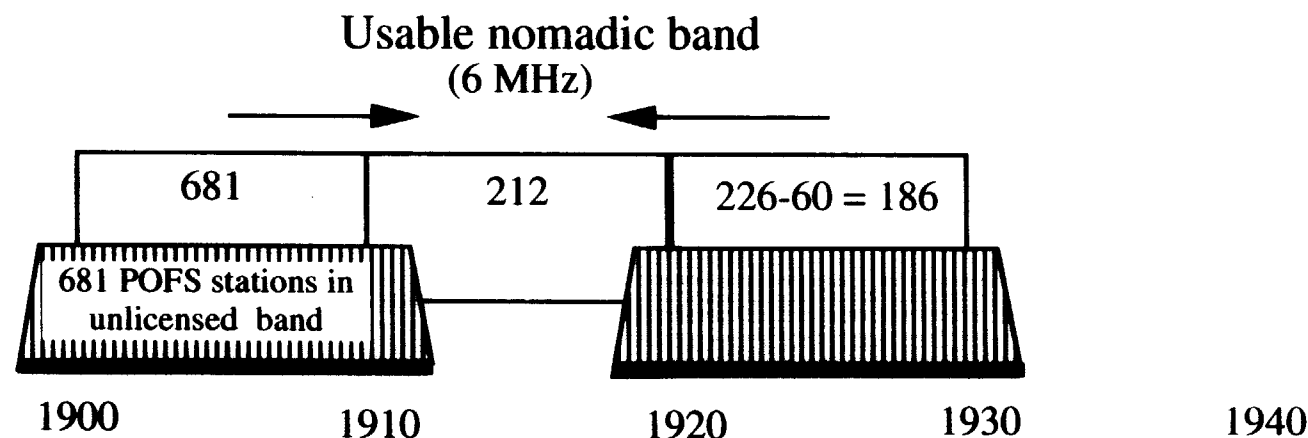
Total \$60 Million for 2 MHz

J. Lovette Feb. 2 1994

Note: because emission limits prevent operation up to the edge of the band, the actual usable bandwidth will be substantially less.

**ALTERNATIVE A . (CONTINUED) 1900-1920 IS ASSIGNED FOR DATA.
(PRESENT FCC SCHEME)**

CASE 2 Same as above, but 2 MHz guard band is sought. Approx 1/3 of adjacent stations must be moved; remainder will require modification.



Relocating 212 cochannel, relocating approx 290 of the 867 adjacent, and modifying the rest provides six MHz for nomadic data.

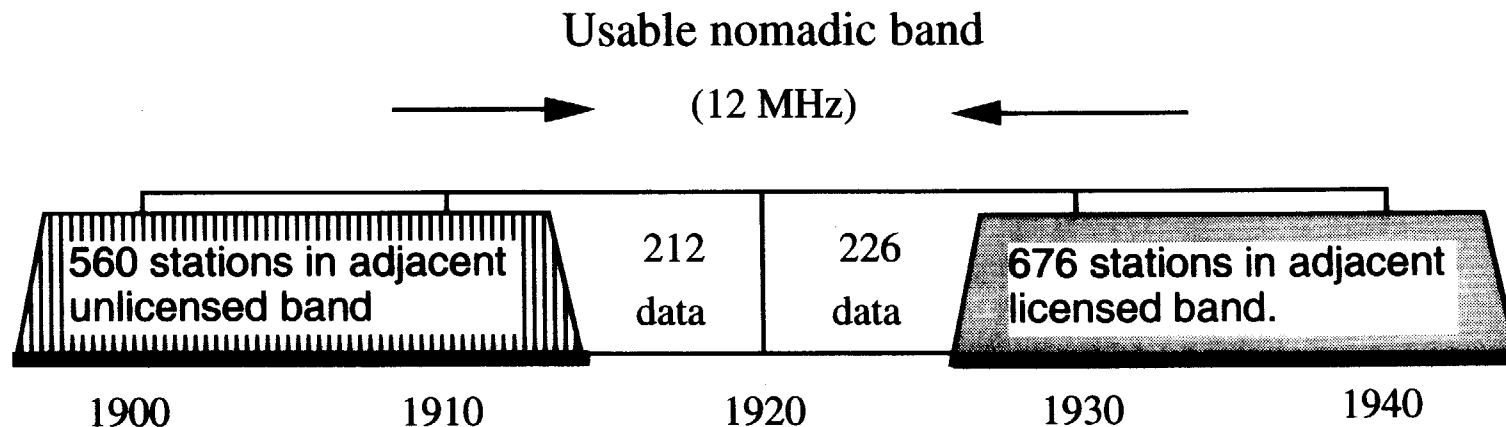
**Cost assumption 212 x \$250K = \$53 Million
plus 290 x \$250 K = \$72 Million
plus 577 x \$25K = \$14.4 million
Total \$134 million for 6 MHz**

J. Lovette Feb. 2 1994

Note: because emission limits prevent operation up to the edge of the band, the actual usable bandwidth will be substantially less.

**ALTERNATIVE B: 1910-1930 IS ASSIGNED FOR DATA.
(PROPOSED BY APPLE AND OTHERS)**

UTAM clears all 438 stations from the lightly loaded band. Assume UTAM also clears 120 stations from voice band, Assume a 4 MHz guard band is sought. .



Relocating 438 cochannel, and modifying 412 of the 1236 adjacent channel, stations, provides 12 MHz.

**Cost assumption $438 \times \$250K = \109 Million
plus $412 \times \$25 K = \10.3 Million**

Total \$119.3 million for 12 MHz

J. Lovette Feb. 2 1994

Note: because emission limits prevent operation up to the edge of the band, the actual usable bandwidth will be substantially less.

Providing contiguous spectrum for voice, with one set of access rules:

A. Removes discriminatory burden on one set (the majority) of voice applications and manufacturers.

B. Provides substantially more usable spectrum because fewer "partitions" to avoid.

C. Offers protection on one side of band from high-power licensed PCS transmitters.

D. MUCH more likely to be able to find frequency available for coordinated deployment, because microwave planning generally avoids adjacent incumbents in overlapping territory. Actual numbers of stations to relocate or modify will probably be less than if present scheme maintained.

MOST voice equipment makers agree.

Under present scheme:

Lower ("wideband") voice manufacturers must deal with:

2142

co- and adjacent channel incumbents.

Upper ("narrowband") voice manufacturers must deal with:

1141

co- and adjacent channel incumbents.

This is a total of 3283 stations.

Under modified (contiguous) scheme the voice manufacturers, combined, must deal with (co- and adjacent channel incumbents):

a total of 2354 stations.